

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: July 2, 1997
Date Received: June 25, 1997
Project: Metro Grab Sample, PO #M57641
Date Samples Extracted: June 26, 1997
Date Extracts Analyzed: June 27, 1997

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE
FOR CHROMIUM, COPPER, NICKEL, AND ZINC
USING METHOD 6010**

Samples Processed Using Method 3005A
Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M57641	0.24	0.30	0.23	<0.05
Method Blank	<0.05	<0.05	<0.05	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: July 2, 1997

Date Received: June 25, 1997

Project: Metro Grab Sample, PO #M57641

**QUALITY ASSURANCE RESULTS FOR
THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS BY
INDUCTIVELY COUPLED PLASMA (ICP)
(METHOD 6010)**

Laboratory Code: 79023 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.24	0.26	8	0-20
Copper	mg/L (ppm)	0.30	0.30	0	0-20
Nickel	mg/L (ppm)	0.23	0.23	0 a	0-20
Zinc	mg/L (ppm)	<0.05	<0.05	nm	0-20

Laboratory Code: 79023 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS	MSD	Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	2.5	0.24	89	88	80-120	1
Copper	mg/L (ppm)	2.5	0.30	94	93	80-120	1
Nickel	mg/L (ppm)	5	0.23	89	88	80-120	1
Zinc	mg/L (ppm)	2.5	<0.05	87	86	80-120	1

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS	MSD	Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	2.5	90	94	80-120	4
Copper	mg/L (ppm)	2.5	99	101	80-120	2
Nickel	mg/L (ppm)	5	92	93	80-120	1
Zinc	mg/L (ppm)	2.5	88	90	80-120	2



nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

KJ AI
06.25.97
1:00

Send Report To: Alaskan Copper Works Contact GERARD Thompson
Company 625 HAWKLAND ST
Address Seattle WA 98134
City, State, Zip 382-8379 FAX # (206) 382-4509 Date 6-25-97
Phone #

[illegible]

SIGNATURE	PRINT NAME	COMPANY	Date	Time
Relinquished by: 	GERALD A. Thompson	ACW	6/25/97	12:57 PM
Received by: 	TOM RUSSELL	FBI	6.25.97	12:57
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Beth Albertson, M.S.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.
Melanie Kirol, B.S.
July 2, 1997

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

**INVOICE # 97ACU0702-1
DUPLICATE COPY**

Accounts Payable
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

RE: Project Metro Grab Sample, PO #M57641: Results of testing requested by
Gerry Thompson, Project Manager for material submitted on June 25, 1997.

1 water sample analyzed for
Chromium, Copper, Nickel, and Zinc
using Method 6010 @ \$65 per sample

\$ 65.00

Amount Due

\$ 65.00

FEDERAL TAX ID # (b) (6)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Beth Albertson, M.S.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.
Melanie Kirol, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

July 2, 1997

**Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134**

Dear Mr. Thompson:

**Included are the results from the testing of material submitted on June 25, 1997
from your Metro Grab Sample, PO #M57641 project.**

**We appreciate this opportunity to be of service to you and hope you will call if you
should have any questions.**

Sincerely,

FRIEDMAN & BRUYA, INC.



**Kurt Johnson
Chemist**

**keh
Enclosures
ACU0702R.DOC**